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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,271	04/30/2001	Radhika Thekkath	MTEC007/00US	1047

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COOLEY GODWARD LLP
ATTN: PATENT GROUP
11951 FREEDOM DRIVE, SUITE 1700
ONE FREEDOM SQUARE- RESTON TOWN CENTER
RESTON, VA 20190-5061

EXAMINER	
KENDALL, CHUCK O	
ART UNIT	**PAPER NUMBER**
2122	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/844,271	THEKKATH, RADHIKA	
	Examiner	Art Unit	
	Chuck Kendall	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/22/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/01/2004 has been entered. Claims 1 – 18 have been amended and are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1 – 4, 6 – 10, 11, 13 –15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayers et al. (U.S. Patent Number 6,353,924) in view of Mann USPN 6,009,270.

In regard to Claim 1, Ayers teaches: (a) executing a program that includes a plurality of instructions including one or more user trace data commands (Column 11, lines 35-45) where the command instructs a processor to write user trace data to a user trace data register, (Column 11, lines 53-55 and Column 12, lines 1-6, also see Column, 8, lines 10 – 25); (b) detecting a write to at least part of said user trace data register Column 8, lines 22 – 25, and (c) in response to said detected write, generating a trace

record that includes part of the user trace data in said user trace data register, (Column 8, lines 8 –12, see lines 22 -25);

wherein execution of said plurality of instructions result in tracing a subset of program execution attributes of interest to said user (11: 18 – 23, see " The event is chosen by user and special instrumentation instructions are inserted to check for the user specified condition... Different events can be assigned to trigger different buffers".

Although, Ayers doesn't expressly disclose wherein each said user data command indicating a selection by a user of user-defined trace data to be written into said user trace data register, Ayers however does teach that " the instrumentation preferably creates a memory region for each program or subprogram in which each program or subprogram respectively stores its corresponding trace information. In this manner, the traces of each program or subprogram remain untangled" (7:30 – 38).

Mann in an analogous prior art teaches that "....loading and retrieving of trace cache 200 contents include a load instruction trace cache record command LITCR and a store instruction trace cache record command SITCR. The command LITCR loads an indexed record in the trace cache 200, as specified by a trace cache pointer ITREC.PTR, with the contents of the EAX register of the processor core 104", and also discloses that user specified trace entries are captured by the trace logic and stored (15:32 – 37). Therefore it would have been obvious to one of ordinary skill at the time the invention was made to combine Mann's teachings of storing user specified traces with Ayers, because storing trace information would enable instructions to be accurately recreated (Mann, 2:53 - 55).

In regard to Claim 2, Ayers teaches a trace capture component (Ayers, Figure 4, item 319 and corresponding text).

In regard to Claim 3 and 10, Mann further discloses identifying said outputted trace data as containing user trace data (Ayers, 15:33 – 35).

In regard to Claim 4, Ayers teaches that the trace data register contains identifier values of program blocks. Since this register contains a value, this register holds a general processor register value (Ayers, Column 8, lines 8-12).

In regard to Claim 6, Ayers teaches saving bits which indicate the direction that branches take during execution, which is useful for debugging (Ayers, Column 4, lines 5-16).

In regard to Claim 7, Ayers teaches that a trace data command is included in the program prior to execution (Ayers, Figure 4, item 313 and 315, and associated text).

In regard to Claim 8, Claim 8 is a system Claim that corresponds with Claim 1. Claim 8 is rejected for the same reasons as Claim 1, where Ayers further teaches a system for carrying out the method of Claim 1 (Ayers, Column 13, lines 49-67).

Claims 9, 11, 13, and 14 correspond directly with Claims 2, 4, 6, and 7, and are rejected for the same reasons as Claims 2, 4, 6, and 7, respectively.

In regard to Claim 15, Claim 15 is a product Claim that corresponds with Claim 1. Claim 15 is rejected for the same reasons as Claim 1, where Ayers further teaches a product for carrying out the method of Claim 1 (Ayers, Column 13, lines 49-67).

In regard to Claim 18, Claim 18 is a computer data signal Claim that corresponds with Claim 1.

Claim 15 is rejected for the same reasons as Claim 1, where a computer data signal is an inherent representation of data stored on any electrical device, such as a computer memory, taught by Ayers (Ayers, Column 13, lines 49-67).

4. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayers et al. (U.S. Patent Number 6,353,924) in view of Mann USPN 6,009,270 as applied in claims 1 and 8, and further in view of "How Debuggers Work: Algorithms, Data Structures, and Architecture" by Jonathan B. Rosenberg, 1996, pages 136-143 (hereinafter Rosenberg).

In regard to Claim 5, Ayers as modified by Mann discloses the method of Claim 1, but does not teach that the user trace data register includes a program variable value. Rosenberg, however, teaches the concept of the program stack, which holds variable values in registers for the purposes of tracing (Page 138, lines 6-7 and Page 139, lines 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rosenberg's teachings of the user trace data register including a program variable value, with Ayers and Mann because program variable values are most useful to programmers in deciphering the functionality of their program.

Claim 12 corresponds directly with Claim 5 and is rejected for the same reasons as Claim 5.

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayers et al. (U.S. Patent Number 6,353,924).

In regard to Claim 16, Ayers teaches the function carried out by the computer-readable program code as taught in Claim 1 by Ayers. Although Ayers does not teach transmitting the computer-readable program code to a computer, it would be obvious to do so, since, in order to execute the code, it needs to be transferred into the memory of a computer.

In regard to Claim 17, the examiner takes official notice that the code is transferred over the Internet, since the Internet is a well-known medium for exchanging data between computer systems in different physical locations.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-2723698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-2723695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TUAN DAM
SUPERVISORY PATENT EXAMINER